

# Role of Indian Railways in Economic Growth of India

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## Abstract

*Indian Railway is the only way by which can an average India Travel from Kashmir to Kanya kumari and from Gujarat to Assam. It Is an entity which has over 150 years of history with a network length of about 66030 km. (Third largest world) it carries 23 Million passenger per day with the Annual freight carrying capacity of 3 Billion tones it is an entity which employs Around lakh people (Seventh largest employer in the world)*

*Despite such staggering figures, India Railway is suffering the vicious cycle of underinvestment. This has led to severe congestion in high density network and over utilization of existing network between meters underinvestment in Railway has led to poor progress in capacity augmentation, compromise a safety a decline is standers of service Reduced efficiency and such optimal freight and passengers traffic. With Reduced budgetary support over the post few, years, Railway has to raise resources from it Revenue to invest in its own infrastructure with Recued revenues from freight due to higher changes than road network and crass sublimation of passenger fair with freight revenue India Railways is left with meager resources to even Replace- its depreciating Assets than augmenting capacity. This has led to negative multiplier effect which has further Reduced Resources for Railways. Despite such challenges post Railway budgets (2018 Budget of Railway was an exception) have focused on populist measure Rather creating the infrastructure to support India Growing economics Ambitions.*

**Keywords :** Passenger facilities, Train Punctuality, Modernization of stations, India Railways, Economic Growth.

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## 1. INTRODUCTION

Indian Railways is a commonly used mode of public transportation in the country. During 2014-15, it carried 8,224 million passengers as against 8,397 million in 2013-14 which is 173 million passengers

carried less than over last year. Passenger kilometers, which is calculated by multiplying the number of journeys by mean kilometric distance of each class was 1.147 billion, up by 0.61 per cent from 1,140 billion in the previous year. Passenger earnings also increased by Rs. 5657.35 crore (15.45 per cent) in comparison with 2013-14.

## 2. PASSENGER REVENUE

Passenger earnings in 2014-15 were Rs. 42189.60 crore. This was Rs. 5657.35 (15.45 per cent) crore higher than the earnings in 2013-14.

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Suburban traffic contributed 5.91 per cent to the total earnings. The remaining 94.09 per cent came from non-suburban passengers. Earnings from Second and Sleeper Class Mail/Express passengers comprised 50.97 per cent of the total passenger earnings. Passenger revenue in terms of earnings per passenger kilometer for different classes during 2013-14 and 2014-15 was following.

Table 1

Segment	2013-14	2014-15 (In paise)
Non-suburban	118.14	126.25
Upper class	30.65	34.98
Second Class –Mail/Express (incl. sleeper class)	17.22	19.37
Non-suburban (all classes)	34.61	39.88
Suburban (all classes)	15.05	16.43
Overall average	32.03	36.78

(Source : Indian Railway Year book 2014-15)

### (a) Passenger Facilities

The allocation under the plan Head “Passenger Amenities” in 2014-15 was Rs. 1038.20 crore (Budget Estimate) and Rs. 1049.91 crore (Revised Estimate).

During the year 2014-15, 1252 stations have far been identified for development under the Adarsh Stations Scheme upto 31.12.2015 out of which 962 stations have already been developed.

During in year, 357 stations were provided with water coolers, 122 stations were electrified and 8 passenger lifts and 43 escalators were provided at 3 and 27 stations, respectively.

- ◇ **Passenger Reservation System (PRS)** : Information Technology continued to be the focus area for improvement in passenger Service and efficiency in Train Operations, During 2014-15, activities indicated following :

Table 2

2010-11	2011-12	2012-13	2013-14	2014-15
2355	2829	3019	3146	3201

- ◇ **Unreserved Ticketing System (UTS)** : A pilot project was sanctioned for Unreserved Ticketing System in 2002-03 and as a nationwide project in 2003-04, UTS is now functioning at more than 5835 locations with approximately 11468 UTS counters on Indian Railways following.

Table 3

2010-11	2011-12	2012-13	2013-14	2014-15
4739	5256	5619	5778	5835

- ◇ **SMS/USSD Based ticketing through mobile phones** : With a view to facilitate those passengers who do not have access to internet, a scheme of SMS/USSD based ticketing through non-internet based mobile phones has been introduced.
- ◇ **Tickets through post offices** : With a view to expand the reach of reserved tickets nearer to doorstep of passengers even in remote areas, Indian Railways have signed a MOU with the Department of Posts for selling of reserved tickets through Post offices. Up to November 2015, this facility is available in about 282 post offices.

### (b) LHB Coach

Following the introduction of the first rake of indigenously designed LHB coach in December 2003, 21 Rajdhani and 20 Shatabdi Express trains with conventional ICF design coaches have been since converted to LHB design. Conversion of the remaining Rajdhani/Shatabdi rakes to LHB design in the progress.

### (c) Clean Train Stations scheme

To bring about improvement in enroute cleaning of trains, 'Clean Train Stations'; Scheme was launched for mechanized cleaning attention to passing through trains during their halts at selected stations. 36 such Clean Train Stations have been made operational so far.

- ◇ **On Board House keeping Scheme (OBHS)** : On Board House keeping Scheme (OBHS) has

been prescribed in all Rajdhani, Shatabdi, Duronto & other important long distance Mail/Express trains for frequent cleaning of coach toilets, doorways, aisles & passenger compartments during the run of the trains. This scheme has been implemented on about 600 pairs of trains. The scheme is further planned to be expanded to cover all long distance Mail/Express trains excluding purely overnight trains.

**(d) Catering Services**

A catering Policy 2010 was issued on 21.07.2010 which has revised the role of agency for management of catering services on IR, IRCTC would continue to be a service provider to the IR and shall be responsible for managing the premium and high end outlets like Food plazas, food courts and Fast food units including institutional catering outside the Railways.

**Table 4  
Catering facilities Provided Through  
(2014-15)**

Pairs of trains with pantry cars/mini pantries	338
Train side vending Units	625
Food Plaza/Fast Food units	188
Automatic Vending Machines	572
Jan ahaar Units	46
Milk Stalls	704
Other static catering units	8639
Book Stalls	1007
Curio Stalls	391
Exclusive Chemist stalls	20

(Source : Indian Railways Year 2014-15)

**(e) Freight Operation**

Revenue earning freight traffic handled during 2014-15 was 1095.26 million tones. NTKMs earned during the year were 681.70 billion. Total loading and fright output, inclusive of non-revenue traffic, were 1101.09 million tones and 682.61 billion NTKMs

respectively. Commodity-wise loading of revenue earning traffic was as follow :

**Table 5  
Freight Operation**

	2012-13	2013-14	2014-15
Tonnes originating (Million)	1008.09	1051.64	1095.26
Net tone kms. (million)	649645	665810	681696
Average lead (kms.)	644	633	622
Good earnings \$ (Rs in crore)	83478.83	91570.85	1031100.15
\$Exclude other good earning such as wharfage, demurrage etc.			

(Source : Indian Railway Annual Report and Account 2014-15).

**(f) Freight Rates**

During the year 2014-15, Freight rates have been rationalized as under :

1. Freight rate for all commodities have been increased by 6.5 per cent inclusive of Fuel Adjustment Component (FAC) of 1.4 per cent
2. Short lead concession in charging of freight for all traffic booked upto 100 kms. Has been withdrawn. Minimum distance for change increased from existing 100 kms. To 125 kms.
3. Lowest Class LR4 has been abolished.

**(g) Trends in Traffic**

Indian Railways entered the Billion Club in freight loading in 2014-15 by achieving 1095 million tones of originating loading. The loading target fixed for 2015-16 is 1107 million tones which 1.09 per cent higher than the achievement of 2014-15. The XIIth plain projections of freight loading in the terminal year of the plan (2016-17) has 1405 million tones.

Indian Railways carried 8224 million passengers in 2014-15 which is about 1430 million higher than the population of the world put together. The annual target for passenger traffic in 2015-16 is 8645 million, which is 5.11 per cent higher than in 2014-15.

### 3. CUSTOMER ENGAGEMENT

Apart from the fact that scarcity of resources has been a major factor in network expansion and capacity creation, the quality of service delivery also has been an area of dissatisfaction. A number of surveys have revealed that lack of cleanliness is the main concern followed by safety and quality of food. As was discussed in the previous chapters, the low levels of investment have led to network congestion. This has restricted the movement of a higher number of trains on these routes apart from compromising on the speed of existing trains.

The low recovery of costs on the passenger segment and high freight rates have led to an imbalance in the revenues from these two business segments. This is quite clear following

**Table 6**

**Recovery of costs Unit cast vis-à-vis Yield per unit  
(Fig in Paise)**

	Coaching Service			Freight Service		
	Cost Per PKM	Earnings per PKM	Ratio	Cost per NTKM	Earnings per NTKM	Ratio
2011-12	54.38	26.99	49.6%	69.64	104.17	149.6%
2012-13	57.76	28.52	49.4%	75.28	128.5	170.6%
2013-14	63.85	31.53	49.4%	80.55	137.5	170.7%
2014-15	74.48	36.78	49.3%	88.57	151.2	170.7%

(Source : Indian Railway Book 204-15)

#### (a) The Challenges

As the growth in the economy picks up in the years to come, Indian Railway will have a challenging task ahead because of line and terminal capacity constraints in transporting the incremental traffic. Therefore, there is need for significant investment in the network, especially the HDN routes and its feeder and other important routes. This would include prioritized capacity enhancement works such as doubling/tripling/ quadrupling and traffic facility works like Intermediate Block Sections, bypasses, longer loops for running long haul trains. The Goods sheds along these routes would also

need to be strengthened. The capacity of Workshops needs to be enhanced to cater to larger volume of maintenance of wagons and coaches. Similarly prioritized electrification and signaling & telecom works are also of importance for reasons of safety and efficiency.

◇ **Slow Speeds** : The speed of freight trains of Indian Railway has stagnated at around 25kmph for a long time. Passenger services are also slow by international standards. The maximum permissible speed on Indian Railways is 130 kmph for Rajdhani/Shatabdi trains and 110 kmph for other mail/express trains, compared to a maximum permissible speed of 200 kmph on several European Railways on conventional networks and more than 300 kmph on high speed corridors in Europe and Japan. Chinese Railways are presently engaged in construction of 12000 kms of dedicated passenger corridors with speeds of 250-350 kmph.

Across zones, the availability of Line Capacity on High Density Network & other important routes is illustrated below (492 out of total 1219 Sections i.e. 40 per cent of Sections are running at 100 per cent or above Line capacity) Table in following.

**Table 7**

**Line Capacity Utilisation on Indian Railways**

Railway	<80%	80-00%	100-120%	120-150%	>150%	Otos*	Total
Central	34	9	11	12	7	1	74
East Coast	16	9	9	16	2	4	56
East Central	16	13	19	22	16	5	91
Eastern	22	22	41	1	--	3	89
North Central	11	3	7	22	2	1	46
North Eastern	12	6	12	6	6	--	42
North Frontier	18	10	4	14	3	11	60
Northern	70	26	29	23	10	4	162

North Western	39	7	6	3	1	4	60
South Central	20	32	23	8	9	--	92
South Eastern	24	13	14	17	1	2	71
South East Central	9	6	9	7	2	--	66
Southern	53	38	25	15	--	--	131
South Western	38	12	--	--	--	1	51
West Central	1	4	7	6	3	--	21
Western	32	18	17	21	4	48	140
<b>Total</b>	<b>415</b>	<b>228</b>	<b>233</b>	<b>193</b>	<b>66</b>	<b>84</b>	<b>1219</b>

\*OTOS : One Train only System

(Source : Indian Railway White Paper 2015)

#### 4. THE NETWORK

Indian Railways run on three gauges, through it is proposed to make the entire network single gauge. The size of the network (gauge-wise) as on 31 March 2015 is shown. Currently broad gauge (BG) contributes about 91 per cent of total track km, while it forms about 89.08 per cent per cent of total route km. The rest of the network, barring hill/heritage railways, is progressively getting converted to BG. The BG network accounts for 97.9 per cent of passenger and almost 100 per cent of the freight traffic. Almost all double/multiple track sections and electrified routes are broad gauge. Meter and narrow gauges are mostly single line and non-electrified. Between 1950-51 and 2014-15, traffic density (million km per running track km) increased from 4.29 to 23.17 on BG.

**Table 8**

#### Gauge Wise Indian Railways Network Percent Share

Gauge	Route KM	Running Track KM	Total Rack KM
Board Gauge	89.08	91.69	92.82
Metre Gauge	7.43	5.77	5.02
Narrow Gauge	3.47	2.52	2.14
<b>Total (Km)</b>	<b>66030</b>	<b>90803</b>	<b>117996</b>

(Source : Indian Railway Year Book 2014-15)

#### 5. MODEL STATION

Model Station scheme was in vogue between June, 1999 to November, 2008. Initially one station per Division of Indian Railways was selected under the scheme. In the year 2006, the criterion was revised to include all 'A' and 'B' category stations on the basis of the annual passenger earnings under the scheme. Under this scheme 594 stations were selected for up gradation. These stations are provided with higher level of amenities to provide greater customer satisfaction. Such facilities include separate waiting halls for upper class & 2nd class, NTES, IVRS, Clock room, improved circulating area, train indication board, adequate lighting, improved signage, SPTMs/UTS, Pay & Use Toilets etc. All 594 stations identified for development under Model Stations Scheme has since been developed.

- ◇ **Modern Station :** Modern station scheme was in vogue between 2006-07 and 2007-08. In this scheme, 5 stations on each Division were identified for developing them as modern stations. In all, 334 stations in the year 2006-07 and 303 stations in the year 2007-08 (total 637 stations) were identified over Indian Railways.
- ◇ **Adarsh Station :** The scheme of Adarsh Stations has been introduced in the year 2009. Under this scheme, 1195 stations have been selected for development as Adarsh Station upto 2015-16. Out of these, 961 stations have already been developed. As per the new guidelines on Adarsh Stations, a number of additional amenities are proposed to be provided, particularly, at stations falling under 'D' and 'E' Category.

#### 6. CONCLUSION

Major issue regarding the passenger satisfaction are availability of accommodation, transit time, punctuality, cleanliness at stations and trains, catering services and reservation facilities.



Non-core business, in particular, Parcel business needs to be strengthened on IR Efforts have been made in the past to involve private sector in creation of Rail infrastructure, but this has been met with Limited success. Absence of regulatory mechanism, no control over network & tariff, uncertainty of traffic materialization and delay in processes has not generated confidence among the investors. Railways would be required to lay down certain benchmarks for appraisal which would be acceptable to the market to enable the relevant projects to be financed.

Indian Railway has a glorious past, a turbulent present and a bright future. It is a giant emerging out of a deep slumber. An awake, alive and kicking Indian Railways can lead the country to greater heights of accomplishment. However, today it is mired in a state of ennui, a state of cynicism that things cannot change.

There is congestion on High Density Network, its feeder routes and other important routes. Network decongestion and expansion is required on these routes. Some works related to these areas are already sanctioned, while others are awaiting sanction.

Challenge in speedy creation of infrastructure is being met Indian Railway by requesting funding by state government and other beneficiaries and execution of projects through Special Purpose vehicles.

Arrears of track renewal are accumulating which will result into disproportionately high maintenance effort. This will also result in reduced reliability of assets. Indian Railways should ensure that procedural formalities of introduction of holiday/festival specials are finalized and trains are lodged in the PRS well in advance of the first run of trains to enable advance reservation and to optimize occupancy.

Indian Railways needs to address the issue of improving the security provided on board the trains comprehensively to encompass setting of norms, provision of adequate resources, coordination among staff and evaluating the results thereof. Challenge in speedy creation of infrastructure is being met by Indian Railways by requesting funding by state government and other beneficiaries and execution of projects through special purpose Vehicles.

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